ERROR CORRECTION CODE BLOCK FORMAT

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ABSTRACT

An error correction code (ECC) block for a data storage disk, includes an array of data that is 88 rows by 172 columns. Each row includes ten bytes of inner parity code and each column includes sixteen bytes of outer parity making the array 104 rows by 182 columns. The ECC block is divided into eight sectors, each sector having eleven rows of data and two associated rows of outer parity, for a total of thirteen rows per sector. The ECC block in accordance with the present invention is half the size of a conventional ECC block but has a higher ratio of parity bytes to data. Consequently, the ECC block of the present invention is particularly advantageous with small form factor disks and first-surface media, i.e., disks with the recording layer on the exterior of the disk or under a very thin transparent layer.

Patent Application